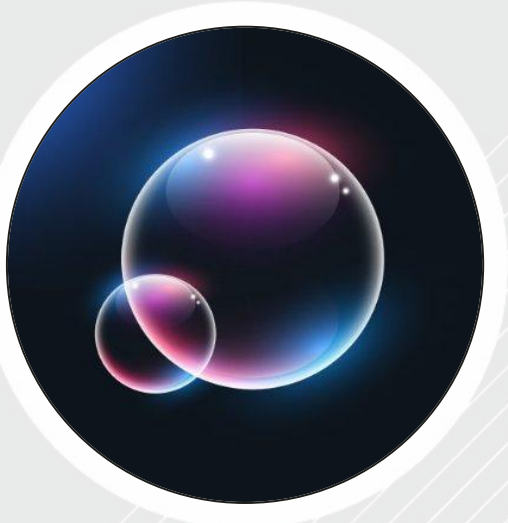
SPYWOLF

Security Audit Report

(TESTNET)



Completed on

December 14, 2022

OVERVIEW

This audit has been prepared for **Bubble DeFi** to review the main aspects of the project to help investors make make an informative decision during their research process.

You will find a a summarized review of the following key points:

- ✔ Contract's source code
- ✔ Owners' wallets
- ✔ Tokenomics
- ✔ Team transparency and goals
- ✔ Website's age, code, security and UX
- ✔ Whitepaper and roadmap
- ✔ Social media & online presence

The results of this audit are purely based on the team's evaluation and does not guarantee nor reflect the projects outcome and goal

- SPYWOLF Team -

TABLE OF CONTENTS

BUBBLE DEFI

PROJECT DESCRIPTION

According to their whitepaper:

Release Date: Presale starts in December, 2022

Category:

CONTRACT 1 INFO

Token Name
BubbleToken

Symbol
$BUB

Contract Address
0xBF96727212E3c7070D9A7db6004bC511031FF9c5

Network
Goerli **TESTNET**

Language
Solidity

Deployment Date
Dec 10, 2022

Verified?
Yes

Total Supply
100,000,000

Status
Not launched

TAXES

Buy Tax
3%

Sell Tax
3%

*Taxes can be changed in future

Our Contract Review Process

The contract review process pays special attention to the following:

- Testing the smart contracts against both common and uncommon vulnerabilities
- Assessing the codebase to ensure compliance with current best practices and industry standards.
- Ensuring contract logic meets the specifications and intentions of the client.
- Cross referencing contract structure and implementation against similar smart contracts produced by industry leaders.
- Thorough line-by-line manual review of the entire codebase by industry experts.

Blockchain security tools used:

- OpenZeppelin
- Mythril
- Solidity Compiler
- Hardhat

CURRENT STATS

(As of December 14, 2022)

Liquidity

Not added yet

Burn

No burnt tokens

Status:

Not Launched!

MaxTxAmount	DEX
2,000,000	Uniswap

LP Address(es)

Liquidity not added yet

TOKEN TRANSFERS STATS

Transfer Count	TESTNET
Uniq Senders	TESTNET
Uniq Receivers	TESTNET
Total Amount	TESTNET
Median Transfer Amount	TESTNET
Average Transfer Amount	TESTNET
First transfer date	TESTNET
Last transfer date	TESTNET
Days token transferred	TESTNET

SMART CONTRACT STATS

Calls Count	TESTNET
External calls	TESTNET
Internal calls	TESTNET
Transactions count	TESTNET
Uniq Callers	TESTNET
Days contract called	TESTNET
Last transaction time	TESTNET
Created	TESTNET
Create TX	TESTNET
Creator	TESTNET

FEATURED WALLETS

Owner address	0x4b371A173cE974059F43D8219Cfc1972187822a8
LP wallet	0x000000000000000000000000000000000000adD
LP address	**TESTNET**

TOP 3 UNLOCKED WALLETS

1 N/A TESTNET

2 N/A TESTNET

3 N/A TESTNET

VULNERABILITY CHECK

Design Logic	Passed
Compiler warnings.	Passed
Private user data leaks	Passed
Timestamp dependence	Passed
Integer overflow and underflow	Passed
Race conditions and reentrancy. Cross-function race conditions	Passed
Possible delays in data delivery	Passed
Oracle calls	Passed
Front running	Passed
DoS with Revert	Passed
DoS with block gas limit	Passed
Methods execution permissions	Passed
Economy model	Passed
Impact of the exchange rate on the logic	Passed
Malicious Event log	Passed
Scoping and declarations	Passed
Uninitialized storage pointers	Passed
Arithmetic accuracy	Passed
Cross-function race conditions	Passed
Safe Zeppelin module	Passed
Fallback function security	Passed

THREAT LEVELS

When performing smart contract audits, our specialists look for known vulnerabilities as well as logical and access control issues within the code. The exploitation of these issues by malicious actors may cause serious financial damage to projects that failed to get an audit in time. We categorize these vulnerabilities by the following levels:

High Risk

Issues on this level are critical to the smart contract's performance/functionality and should be fixed before moving to a live environment.

Medium Risk

Issues on this level are critical to the smart contract's performance/functionality and should be fixed before moving to a live environment.

Low Risk

Issues on this level are minor details and warning that can remain unfixed.

Informational

Information level is to offer suggestions for improvement of efficacy or security for features with a risk free factor.

FOUND THREATS

⚠ High Risk

If minTokenToSwap is set to 0 and contract's token balance is 0, contract will halt on sell and selling will flail.

```
function setMinTokenToSwap(uint256 _amount) external onlyOwner {
    minTokenToSwap = _amount;
}

function distributeAndLiquify(address from, address to) private {
.....................
uint256 contractTokenBalance = balanceOf(address(this));

bool shouldSell = contractTokenBalance >= minTokenToSwap;
.....................
}
```

- Recommendation:
  - Ensure that minTokenToSwap variable is always above zero.

FOUND THREATS

⚠ Medium Risk

Owner can blacklist address making it impossible to sell.

```
function addOrRemoveBots(address[] memory accounts, bool value)
    external
    onlyOwner
{
    for (uint256 i; i < accounts.length; i++) {
        require(
            accounts[i] != address(dexRouter) && !dexPair[accounts[i]],
            "$BUB: cannot blacklist Dex"
        );
        isBot[accounts[i]] = value;
    }
}
```

Owner can set max transaction limit but cannot lower it than 100 $BUB tokens.
Market value of 100 $BUB tokens can be lower than the fees associated with the transaction

```
function setMaxTxnLimit(uint256 _amount) external onlyOwner {
    require(_amount >= 100e9, "$BUB: should be greater than 100 $BUB");
    maxTxnLimit = _amount;
}
```

- Recommendation:
  - Considered as good max transaction limitation is the amount to be not lower than 0.1% of total supply.

FOUND THREATS

⚠ Medium Risk

Owner can set buy/sell fees up to 30%.
Combined buy+sell = 60%.

```
function setBuyFeePercent(uint256 _devFee, uint256 _lpFee)
    external
    onlyOwner
{
    devFeeOnBuying = _devFee;
    liquidityFeeOnBuying = _lpFee;
    require(
        _devFee.add(_lpFee) <= percentDivider.mul(3).div(10),
        "$BUB: can't be more than 30%"
    );
}

function setSellFeePercent(uint256 _devFee, uint256 _lpFee)
    external
    onlyOwner
{
    devFeeOnSelling = _devFee;
    liquidityFeeOnSelling = _lpFee;
    require(
        _devFee.add(_lpFee) <= percentDivider.mul(3).div(10),
        "$BUB: can't be more than 30%"
    );
}
```

- Recommendation:
  - Considered as good tax deduction practice is buy and sell fees combined not to exceed 25%.

Informational

Owner can include/exclude address from fees, max transaction limit and max wallet limit.
If dex pair address is included in max wallet and max wallet limit is too low, selling will fail.

```
function includeOrExcludeFromFee(address account, bool value)
    external
    onlyOwner
{
    isExcludedFromFee[account] = value;
}

function includeOrExcludeFromMaxTxn(address account, bool value)
    external
    onlyOwner
{
    isExcludedFromMaxTxn[account] = value;
}

function includeOrExcludeFromMaxHolding(address account, bool value)
    external
    onlyOwner
{
    isExcludedFromMaxHolding[account] = value;
}
```

RECOMMENDATIONS FOR

GOOD PRACTICES

1. Consider fundamental tradeoffs
2. Be attentive to blockchain properties
3. Ensure careful rollouts
4. Keep contracts simple
5. Stay up to date and track development

BUBBLE DEFI

GOOD PRACTICES FOUND

- ✔ The owner cannot mint new tokens after deployment
- ✔ The smart contract utilizes "SafeMath" to prevent overflows

CONTRACT 2 INFO

Token Name
PresaleBub

Symbol
N/A

Contract Address
0x37df1e984F3b570D1eABfF4404EA141990c9A6bE

Network
Goerli **TESTNET**

Language
Solidity

Deployment Date
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Verified?
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Total Supply
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Status
Deployed

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Sell Tax
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LP address	**Presale contract**

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Informational

Information level is to offer suggestions for improvement of efficacy or security for features with a risk free factor.

FOUND THREATS

⚠ Medium Risk

Owner can enable/disable tokens claim status, making it impossible to claim bought tokens.

```
function setClaim(bool _value) external onlyOwner {
    claimEnable = _value;
}

function claimToken() public {
require(claimEnable,"$BUB: wait for enable claim");
.........
}
```

Informational

Owner can change presale tokens price.

```
function changePrice(uint256 _price) external onlyOwner {
    tokenPerEth = _price;
}
```

Owner can withdraw any tokens from the contract.

```
function changeToken(address _token) external onlyOwner{
    token = IBEP20(_token);
}

function transferFunds(uint256 _value) external onlyOwner {
    owner.transfer(_value);
}

function transferTokens(uint256 _value) external onlyOwner {
    token.transfer(owner, _value);
}
```

Owner can withdraw any tokens from the contract.

```
function setPreSaleTime(uint256 _startTime, uint256 _endTime)
    external
    onlyOwner
{
    preSaleStartTime = _startTime;
    preSaleEndTime = _endTime;
}
```

Informational

Owner can change presale settings - min buy amount, max buy amount, hard cap, total presale supply (totalSupply is for informational purpose only).

```
function setPreSaletLimits(uint256 _minAmount, uint256 _maxAmount,
uint256 _total, uint256 _cap) external onlyOwner {
    minAmount = _minAmount;
    maxAmount = _maxAmount;
    totalSupply = _total;
    hardCap = _cap;
}
```

Owner can set presale start/end time at any moment without limitations.

```
function setPreSaleTime(uint256 _startTime, uint256 _endTime)
    external
    onlyOwner
{
    preSaleStartTime = _startTime;
    preSaleEndTime = _endTime;
}
```

If owner's account is out of $BUB tokens, presalers cannot claim their tokens.

RECOMMENDATIONS FOR

GOOD PRACTICES

1. Consider fundamental tradeoffs
2. Be attentive to blockchain properties
3. Ensure careful rollouts
4. Keep contracts simple
5. Stay up to date and track development

PresaleBub

GOOD PRACTICES FOUND

- ✔ The owner cannot mint new tokens after deployment
- ✔ The owner cannot stop or pause the contract
- ✔ The owner can set a transaction limit, but can’t lower it than 1% of total supply
- ✔ The smart contract utilizes "SafeMath" to prevent overflows

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Disclaimer

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No applications were reviewed for security. No product code has been reviewed.